

## PROPER METHODS FOR KEEPING MANURE



PILING MANURE WHERE THE RAIN WILL WASH OUT ITS FERTILIZING ELEMENTS.

Stable manure should never be thrown out on a field where it will not soon be mixed with the soil; nor should it be piled out in the open, for much of the fertility will be lost by leaching. If the manure cannot be placed on a field that is to be planted shortly, it is best to allow it to accumulate in the stall, being careful to keep the stall dry and well littered.

Corn stover, wheat, oat or rye straw, leaves, or pine straw can be used for litter.

It is a good plan to use as much

litter as possible for bedding; for by being mixed with the animal manure it is more readily decayed. Much waste material can be made into good manure in this way.

The stalls should be fairly deep, so that they will hold all the manure which accumulates between times of planting the various crops. The animals will pack the manure by tramping, and it keeps best when packed. It should be moist, but not wet, and should be protected from sunshine.—Clemson College Bulletin.

## SILAGE OF DIFFERENT TYPES

Material Used in Construction of Silo Has No Influence on Quality of Its Contents.

(By C. H. ECKLES, Missouri Agricultural Experiment Station.)

One of the questions that comes up when a new silo is to be purchased or built is whether the material used in the construction of the silo has any influence on the quality of the silage. The Missouri experiment station has been studying this problem for two years. Samples of silage were taken at the wall and at the center in silos of the stave, iron, tile, Gurler, and concrete types. These samples were analyzed and the results compared. The results are given in detail in Research Bulletin 22, recently issued. The results of the analysis showed no difference in any way between the silage from the different types. No one should be persuaded to base the selection of the silo to be used upon the statement or supposition that one type of silo makes better silage than another. Any silo that has a tight wall that keeps out the air and is strong enough to withstand the pressure will preserve silage.

If the corn has sufficient moisture when put into the silo the only thing that can interfere with the making of good silage is the admission of air as the result of a poorly built silo or insufficient packing at the time of filling.

## FINE RECIPE FOR WHITEWASH

Directions Submitted By Expert of Oklahoma College—Intended for Exterior Work.

In reply to a request, Dr. Charles K. Francis of the Oklahoma A. and M. College submits directions for whitewash as follows:

1. Place 62 pounds (one bushel) of quick lime in a watertight barrel or tub. Slake this by pouring on 12 gallons of hot water. Keep covered until steam ceases to rise, and stir occasionally to prevent scorching.

2. Dissolve two pounds common salt and two pounds of zinc sulphate in two gallons of boiling water.

Pour 1 into 2, add two gallons skim milk and mix thoroughly.

Whitewash prepared in the manner outlined is intended for exterior work, such as fences and outside buildings, but may be used for interior work.

## INJURY DONE BY CHINCH BUG

Sucks Juices of Corn, Wheat, Sorghum and Other Plants—May Be Trapped in Ditches.

The chinch bug sucks the juices of corn, wheat, sorghum and other plants of the grass family. They may be trapped in dusty ditches. If they go from wheat to corn, or in rainy weather an oil or tar barrier may be necessary. If they get to the corn, spray it with soapuds, emulsion or tobacco solutions. The clump forming grasses by roadsides and in waste lands may be burned in late fall and early winter to kill chinch bugs which collect there for the winter.

## GOOD FEEDING IS IMPORTANT

Folly to Expect Profit From Animals Not Well Kept—Good Breeding Is of Big Value.

The more we study the live-stock business, especially as generally conducted in the South, the more thoroughly we become convinced of the utter folly of expecting a profit from animals that are not well fed. Breeding is of great value, but to the South, good feeding is even more important, for good breeding without good feeding passes for naught.—The Progressive Farmer.

## PROFIT FROM PIGEONS

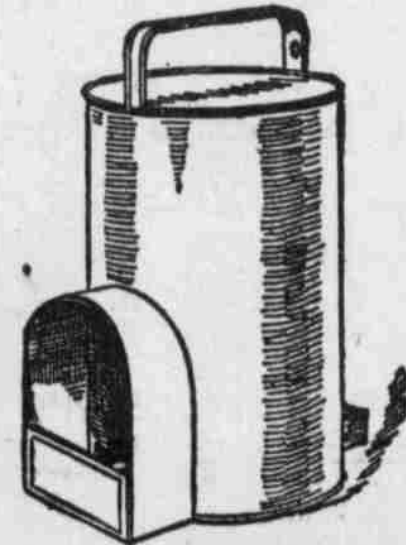
Eggs Usually Fertile if Birds Are Properly Fed.

Fountains or Pans Are Best Adapted for Drinking Vessels—Mixture of Staple Grains May Be Used for Feeding.

Pigeon eggs are usually fertile if the pigeons are healthy and properly fed, especially when they have free range. One squab (usually the male) frequently hatches first, and where there are several cases where one squab outgrows its nest mate, it may be advisable to sort the squabs in the nests, making the pairs as uniform as possible in size and age. If the parent bird dies the squabs may sometimes be removed to a nest where there is only one squab, or they may be fed artificially, although this process takes considerable time.

Roosts of various sizes, usually arranged in perpendicular rows, are placed at convenient points in the pen. A good type of roost is A-shaped made of two boards about 5 inches wide and 6 or 7 inches long, placed directly over each other so that the pigeons will not soil one another with their droppings. If hoppers or feed troughs are used they should be of good size, while the hoppers should be constructed so that the pigeons cannot waste the grain easily by throwing it onto the floor. Fountains or pans with floats in which the pigeons cannot bathe are best adapted for drinking vessels, while a galvanized-iron pan from 3 to 4 inches deep and 15 to 25 inches in diameter makes a good bath pan.

Many varieties of grain are used in feeding pigeons. A good mixture of staple grains may be made of equal parts by weight of cracked corn, hard red wheat, kafir corn, and Canada peas, with a small quantity (10 per



Drinking Fountain.

cent) of hemp and millet seed added during the molting season. Other grains which may be substituted for or added to these are peanuts, oats or hulled oats, buckwheat, Egyptian corn, barley, cowpeas, and milo maize, while a small quantity of stale bread, rice, rape, millet, canary, vetch, and sunflower seed may be fed for variety. Canada peas are expensive, but seem to be essential to the best results, especially during the breeding season, and apparently take the place of green feed to some extent. Peanuts are being used to some extent in place of Canada peas. Green feed, such as cut clover, alfalfa and grass, lettuce, and plantain leaves may be fed to advantage, but is not absolutely essential.

## GROWTH OF POULT IS RAPID

Furnish Plenty of Nutritious and Easily Digested Food—Make Changes in Ration Gradually.

The growth of young turkeys is rapid. Give plenty of nutritious and easily digested food. For the first five days feed four parts of bread crumbs and one part of boiled eggs. Feed one meal a day of rolled oats and give all the sour milk they will drink. Change gradually and in three weeks feed six parts of wheat and two parts of corn, with rolled oats once a day. From the time the birds are ten weeks old until maturity give: Wheat, ten parts; whole oats, two parts—increasing to ten parts in two weeks; cracked corn, ten parts.

## TREAT WIRE FENCE INJURIES

First Wash Wounds Thoroughly With Warm Water—Use Care Not to Cause Infection.

When animals are injured by getting into a barbed wire fence their wounds should be washed thoroughly with warm water, then the hair around the cut clipped and the wound washed again. Dirt can be removed from the cut by means of absorbent cotton. Care should be taken not to cause infection. A powder made by mixing together equal parts of slaked lime, powdered sulphur and charcoal dusted on will have a healing effect.

## INCREASED GROWTH OF SCAB

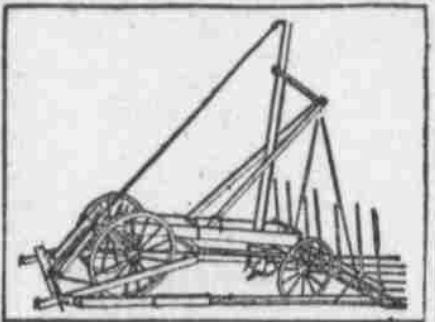
For Legumes Limestone Has Other Effects Than That of Merely Counteracting Acidity.

It is just possible that for legumes limestone has other effects than those of merely counteracting acidity. On potatoes burnt lime does certainly increase the growth of scab germs; and in the soil it may increase possibly the number of nitrogen absorbing bacteria which forms the leguminous nodules,

## EASILY MOVED HAY STACKER

Considerable Time Saved With Outfit Patented by Missourian and Illustrated Herewith.

Stacking hay causes considerable loss of time when the outfit is moved from field to field, especially if roads must be traveled and telephone wires raised. Oler P. Vroom, a Missourian, has recently patented the wagon stacker shown here, assigning his rights to a manufacturing concern of his town.



Wagon Hay Stacker.

The ease of moving the stacker makes the idea appeal immediately to those who have handled much hay.—Farming Business.

## CULTIVATION TO HELP CORN

Shallow as Well as Deep Tillage Will Destroy Weeds—Keep Surface of Soil Mellow.

Deep cultivation of corn is never necessary when the soil has been properly prepared before planting. This is the result shown by investigations at the Minnesota College of Agriculture as well as by investigations of the United States department of agriculture. In most cases cultivation is necessary almost entirely for the elimination of weeds. Shallow cultivation will do this just as well as deep, and it does not injure the roots of the plants.

Experiments have shown, however, that the yield of corn increases with succeeding cultivations up to six. Corn cultivated twice at University Farm, St. Paul, yielded 45 bushels of corn and 3,210 pounds of stover, giving a profit of \$5.96. Corn cultivated six times yielded nearly 63 bushels and 3,031 pounds of stover, giving a profit of \$10.90.

The frequency of cultivation depends largely on the character of the soil and the conditions of the seed-bed at the time of planting. Sufficient cultivations should be made, however, to keep the surface of the soil mellow, free from weeds and loose.

Late cultivations should not be more than two or three inches deep.

## USE CARE IN TRANSPLANTING

Roots of Trees Should Not Be Exposed to Sun and Wind—In Dry Weather Cover With Straw.

One of the greatest mistakes when shipping trees is that of allowing the roots to become exposed to sun and wind. It is absolutely necessary to keep the roots wet from the time the trees are received from the nursery until they are planted. All roots that are injured in digging should be cut with a keen knife on the underside so that the roots will grow straight down.

If the trees are not ready to plant, the roots may be perfected by "heeling them in." By this is meant to set the tree in a trench and cover the roots with loose earth. If the weather is very windy and dry throw a little straw over the trees and cover with burlap.

## DRAINAGE ADDS TO PROFITS

By Increased Yield and Decreased Cost of Cultivation Value of Land Is Often Doubled.

Land that is too wet for the most profitable production of crops, should be drained. Even uplands may often be drained with profit, especially hill-sides subject to erosion or inclined to be "spouty." Indeed, drainage is profitable wherever it is necessary to the fullest use of the land.

It is not uncommon for lands too wet for cultivation to produce, when drained, 60 or 70 bushels of corn or oats to the acre. On much of the drained land the increase of yield is from 25 to 100 per cent, and by the increased yield and the decreased cost of cultivation the value of the land is often doubled.

## LEGUME CROPS AID DEFECTS

Where Soil Lacks Nitrogen Clover, Cow Peas, Soy Beans, Etc., Are Recommended.

If sorrel and oxeye daisy seem to be the chief natural product of a field it is perfectly safe to conclude that the soil lacks nitrogen. If the cultivated crops fail to show a dark, healthy green color and are short in stem or vine, the same lack of nitrogen is undoubtedly at fault. Legumes—clovers, cow peas, soy beans, vetches, etc.—will help remedy the defect.

## SAVE NUTRIMENT IN ALFALFA

Rake Crop in Windrows Soon as Thoroughly Wilting—When Well Cured Haul to Mow.

Save all the nutriment in the alfalfa by raking it in windrows as soon as it is thoroughly wilted. After curing in this position for a while, the windrows should be turned over with the rake or tedder, and later raked into bunches and when well cured, hauled to stack or mow.

## ECONOMICAL WAY OF UTILIZING STRAW



ONLY CORN HAS BEEN GATHERED—FORAGE IS LEFT TO DECAY.

(Prepared by the United States Department of Agriculture.)

The annual straw crop of the United States amounts to approximately 120,000,000 tons, and the average value of all kinds of straw is placed by specialists in the United States department of agriculture at about \$5 a ton when fed to live stock. In many sections of the country, of course, no such price can be realized and, as a matter of fact, only a very small part of the crop actually is sold. Five dollars a ton, however, may be considered to represent the value of straw to the farmer if he will use it properly.

Nevertheless, investigations by the department show that only about two-thirds of the great straw crop is put to its best use—live-stock production. Of the remainder a little more than one-half is sold or turned under and the rest, which amounts to about 15 per cent of the total crop, is burned, as though, instead of being a potential source of revenue, it was merely a nuisance to be got rid of in the easiest possible manner. Plowing under, too, though not such an absolute waste as burning, is an uneconomical way of utilizing straw. It does contribute something, it is true, to soil fertility, but the benefit to the land is less than that which would be derived from the manure produced by feeding the straw to live stock. "Of all systems of attaining permanent soil fertility," says a recent publication of the department, "none is so practical or as easily available as that of feeding live stock."

In order to illustrate how straw may be most economically utilized, the new

publication already mentioned, which is part 4 of a comprehensive survey of the entire meat situation in the United States, gives three sample rations for wintering a breeding herd of beef cattle. Any one of these rations, it is said, will prove economical. They are as follows:

## Rations for Wintering Breeding Cows.

Ration	Pounds
Straw	10
Silage	20
Cottonseed meal or linseed meal	1 1/2
Ration 2	
Straw	20
Cottonseed cake or oil cake	2
Ration 3	
Straw	10
Shock corn	10
Cottonseed meal	1

The economical use of straw in such combinations as these will also enable farmers in the western states to purchase their feeder cattle in the fall and carry them through the winter without undue expense. The prices for feeder cattle are frequently so much lower in the fall that if the cost of wintering can be kept down, it will prove profitable to secure stock at that time instead of in the spring. As a matter of fact, in a number of western states it frequently happens that grass is wasted because cattlemen are unwilling to purchase enough steers to consume it at the high prices frequently asked in the spring. An easy way to avoid this waste and to secure the maximum returns from available pastures is to purchase the feeding herd in the fall and carry it through the winter on a ration in which straw plays an important part.

## WINTER ROUGHAGE FOR HENS

Nothing Better Than Lawn Clippings, Second Crop Clover, and Grass When Properly Cured.

Every poultryman ought to provide a supply of green feed for the use of the hens in winter. Green vegetables are excellent in their place, but nothing is better than lawn clippings, second-crop clover and grass.

Lawn clippings should be raked up and spread on the barn floor or in some other shady place to dry, writes Charles H. Chesley in Farm and Home. Two days of drying in the shade properly cures the grass. It should then be put in bags and hung away where it can be kept for winter use.

Second-crop clover, of any variety, is excellent and it should be cured and treated in the same manner as the lawn clippings. Cut clover before it blooms. By mowing the timothy field or red top patch closely, after it has had a chance to get a start in late summer, a lot of winter roughage for the birds also can be obtained.

## HAYING TOOLS SAVE EXPENSE

With Hayloader Man Can Complete Load in Half Time, Says Expert of Ohio State University.

How long does it take to pitch on a load of hay? Prof. H. C. Ramsower of the agricultural engineering department, Ohio State university, says it takes from 35 to 45 minutes for one man to pitch on one load while the same man can complete a load in 15 to 20 minutes with a hayloader. Professor Ramsower also points out the advantage of having a complete line of haying machinery to save extra expense of labor during the harvest season. Slingers and hay carriers are especially useful in saving difficult labor.

## FATTEN CATTLE FOR MARKET

Some Sections in South Where Shelter Is Not Required—Becoming One of Chief Industries.

In many sections of the south cattle are fattened for market without shelter during any period of the year, and in some favored spots they are fed no grain whatever. The raising of blooded stock is also becoming one of the chief industries.

## REMOVE ALL DECAYING WOOD

Harboring Place for Insects and Disease That Will Spread to Healthy Parts of Tree

Dead or decaying wood of any fruit plant should be removed as soon as it is noticed, it matters not what the season may be. Such wood harbors disease and insect pests that will spread to healthy parts of the tree and to neighboring trees.

## COCO IS SERIOUS WEED PEST

Plant Also Known as Nut Grass Is One of Most Troublesome Weeds to Deal With.

(By E. R. LLOYD, Director of Mississippi Experiment Station.)

Coco or nut grass is one of the most troublesome weeds that we have to deal with in the state. There are large areas of splendid land, as well as a good area of hill country, infested with this grass, but we know of no practical method of eliminating it and it has no economic value. Many Delta farmers are using coco land for growing small grains and alfalfa and it does not seem to interfere with crops which are planted broadcast.

The grass may be held partially in check by sowing the land thickly to fall oats and as soon as the crop is removed in June plant the land broadcast to cowpeas. The two crops will shade the land practically an entire year and smother out a considerable portion of the grass, but this method will not exterminate it.

## ARGUMENT FOR GOOD ROADS

Railroads of Country Haul Yearly 195,586,840 Tons of Farm Products Over Smooth Rails.

There is the strongest kind of an argument for good roads in a report of the Interstate commerce commission that in one year the railroads of this country hauled 1,949,089,599 tons of freight, of which 195,586,840 tons were the products of agriculture. This tonnage of freight was hauled over 350,000 miles of railroad, but before it reached the railroad it was hauled over 2,300,000 miles of wagon road.

The railroad haul was over the smoothest and most level road that can be made. The highway haul was mostly over unimproved and ungraded dirt roads, full of ruts, sinkholes and knolls. If the farmers were organized into corporations as the railroads are, they would soon discover they could not afford the enormous waste of bad roads.—Kansas City Times.

## DON'T MIX DRESSED POULTRY

Pack Young and Old Fowls Separately—Carefully Place Nest Tag on All Shipments.

In marketing fowls, especially chickens, never mix the young dressed fowls with the old. If you do, the young go in at the price of the old, no more. Pack all the dressed roosters in a box to themselves, but don't mix the old with the young in this case, either.

Tag all your shipped fowls, for if you are sending prime stock the tag will recommend you highly, not only to the house you ship to, but the customers he sells to.

The young poultry hatched late this summer can be sold for roasters in January and February.